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*NOTE; AT THIS POINT I START 237.DOC. THIS WILL EMBRACE THE 1970 FILE.

OST and COSATI

Council on Communications

One of the final acts of the ill-fated Council on Communications, the program that was being organized by William T. Knox, Congressman Emilio Daddario, Dillon Ripley (Smithsonian), Andrew A. Aines, and a few others, was a three-day conference at the Smithsonian Belmont Conference Center, Elkridge, Maryland, which was held 14-16 December 1969. The purpose of the conference was to review previous activities, prepare a draft prospectus for the Council, agree on the mode of future operations, and to prepare a slate of future Council programs and projects. A brief summary of the conference is provided because it mirrors the interests and concerns of a very select group of participants.(87) In addition to the individuals named below, some of the others were: Paul Armer (Stanford University), Professor C. West Churchman (University of California), Dr. Ruth M. Davis (National Library of Medicine). Edwin B. Parker (Stanford University), Professor Robert L. Shayon (Annenberg School of Communication, University of Pennsylvania), Dr. M.C. Shelesnyak (Interdisciplinary Communications Program), Henry Strauss y Strauss & Co.) Thomas A. Wagge (U.S. Federal Reserve Bank). and Andrew A. Aines (OST).

(87) Aines, Andrew A., OST, Memorandum to Dr. Lee A.DuBridge, Director, OST, Subject: Council on Communication Conference, January 6, 1970, pp 4.

Dr. John Pierce, then of Bell Laboratories, played a strong and aggressive role at the conference, advocating an active program, but with a narrow coverage of a few projects annually. He advocated that the group should seek to influence government decisions and legislation, focus on the direction being taken in information-processing and communications, and undertake key studies. He lamented the lack of integrating mechanisms and high-level direction. He hoped for better unity by inter-relating technology, people and problems together. FTC Commissioner, Mary Gardiner Jones, focused on how citizens could better participate in the communications loop, arguing that it was necessary in our society to know what their views were on consumer and related matters. The New York CIty Emergency Telephone (dIal 911) system was discussed and how it might be expanded into a mechanism to bring bureaucrats and citizens together for meaningful communications. The discussion was expanded to explore the role of information centers (suicide prevention and poison control are examples), people interaction with newspapers and radio stations, and the possibility of employing neighborhood libraries as a new point of entry for citizen-government intercommunication.
It was agreed that there was a need for a continuing inventory of rapid response information and inquiry systems. Also deemed desirable was the need to work more closely with "future-oriented" people (youth); we need more visibility and earlier warning to find the "trauma trails" and "action-negative" areas where potential damage was possible. Professor Otto H. Schmitt, University of Minnesota, discussed the externalization of human memory, which requires requires considerably more than a library effort, and then called for more obligate, more effective feedback information systems. Bill Knox unsuccessfully sought the support of the attendees to communicate to Congress their distaste for a Senate bill (S.2004), which would, if passed, amend the Communications Act of 1934 by establishing new procedures for consideration of applications for renewal of broadcast licenses. Also discussed were prospective projects, such as: What kind of a communicative society do we want? Where do we, as a country, appear to be heading? Do we need a map of national decision-making foci? Should we prepare micro-scenarios of future social situations with possible technical communication surrounds? Would there be value in a public dialogue on an integrated set of economic, regulatory policies for different communications media? Should the Council hold invitational seminars for national information policymaking? Should we apply quantitative mensuration on concepts/practices for resource allocation in selected communication/information situations? Should we consider a wider communications research and development agenda that would identify gaps, explore behavioral and societal effects of new information technologies, the human capacity for absorbing new information, improvement of decision-making processes in government, industry, etc., and the "generation gap" as a conflict of communication styles? Should the Council recommend a stronger R&D arm for FCC?

Obviously, several interesting ideas were expressed at the conference,some of which have come to fruition, but not because of the work of the Council. The Council on Communications was stillborn because of the lack of funding, the unwillingness of the Smithsonian Institution to use its own funds, and the difficulty of getting Congress to support the operation. To this

day, I lament that the Council or something like it was not created back in the late 1960s or early 1970s. Almost two decades have passed and, as a society, we have not yet found a way to achieve the national or even Federal government coordination, integration and unity, called for by John Pierce and others

International

(88) Black, Robert B., Director, Office of Social and Civic Development, Bureau for Latin America, Agency for International Development, Letter to Andrew A. Aines, OST, December 8, 1969, pp 2.

(89) Aines, Andrew A., OST, Memorandum for Robert B. Black, Bureau for Latin America, Agency for International Development, Department of State. Subject: United States-Latin American Scientific and Technical Information Exchange Program, January 8, 1970, pp 5.

One of the strong beliefs that I cherished as the chairman of COSATI was the need for a strong U.S. government international STI program. The reasons were straight-forward but simple. The United States was both a producer and consumer of STI, and up to World War II was more the latter than the former. While the United States was, during the 1960s, the world's leader in science and technology, it was illogical to conclude that this condition would prevail forever. If this supposition was correct, the time would come when we would be drawing on the world's STI bank once again. Hence, it would not be the height of wisdom to dig an STI moat around our shores. We should gladly share our STI, except for security and industrial information, with other countries. The virtue of maintaining the long tradition of free flow of scientific knowledge, so precious to science and scientists, should never be forgotten. Moreover, through fortunate circumstances, we had emerged as the leader or one of the leaders in global high technology, especially information and communications technology. There was also the tradition of generosity that distinguished the United States and its leaders. What better way to demonstrate our generosity and leadership, than by assisting other countries in developing their national information systems in science and technology? As the strongest and most advanced country in the Western Hemisphere, we ought to assist all countries in Latin America on a priority basis that wanted our help in developing their information systems, especially in science and technology. These were the reasons why I thought it imperative that we work closely with the Agency for International Development to achieve this goal. We encouraged A.I.D. to consider the establishment of a training course for Latin American specialists in the field of scientific and technical information. The proposal was "enthusiastically received by the delegates to the Special Committee of IA-ECOSOC," according to Robert B. Black of A.I.D., who wrote: "We greatly appreciated your assistance in the development of the proposal...We are tentatively planning to establish the training program through a contractual arrangement with a local university early next year. Our preliminary thinking is that the contractor would conduct two 4 to 6 week courses, accommodating a total of 3 to 4 specialists from each Latin American country, during 1070-1971. The research staff would also be available to visit interested Latin American countries to advise on strengthening the STI infrastructure in those countries." Black then asked COSATI to help prepare some of the material for the course and act as a Board of Directors for the project." (88) In due course, I responded with a plan for the program. In the same communication, I pointed out that it would not be appropriate for COSATI to serve as the "Board of Directors" for the initiative, but it was possible for A.I.D. to invite interested members of COSATI to serve as individuals (89). It was not clear how effectively A.I.D. ran with the ball; its record of implementation was occasionally spotty in those days, but subsequently the Organization of American States (OAS) got involved in the program.

OST and COSATI

In sharp contrast, during the same period, I remember a session of a conference on Computers, Communications, and the Public Interest, organized by The Johns Hopkins University and the Brookings Institute, which was devoted to Designing Organizations for an Information-Rich World, the title of a paper originally prepared by Herbert Simon. The chairman of the overall conference was Dr. Martin Greenberger, The Johns Hopkins University, a computer scientist who was involved with OST and COSATI STI programs from time to time. Guests at a dinner session included Karl Deutsch (Harvard University), Lincoln Gordon (The Johns Hopkins University), Nicholas Johnson (FCC), Anthony Oettinger (Harvard University), Joseph Pechman and Leonard Silk (The Brookings Institution), John Platt (University of Michigan), Martin Shubik (Yale University) Herbert A. Simon (Carnegie-Mellon University) and Joseph Weizenbaum (MIT). John Buckley and Andrew A. Aines represented OST (90).

(90) Greenberger, Martin, The Johns Hopkins University, The discussion report on Designing Organizations for an Information-Rich World, was to be submitted to The Johns Hopkins Press on January 16, 1969, according to a letter to Aines from Greenberger (91).

(9l) Greenberger, Martin, Johns Hopkins University, letter to Andrew A. Aines, OST, l page. The letter included the

preliminary edited version of the dinner discussion prepared by Greenberger and his staff for "last chance" editing.

Some of the comments made at this unusual meeting were pertinent, insightful and, at times, entertaining. For example, in discussing information for decision-makers, the focus turned to the information-gathering habits of President Lyndon B. Johnson. Opening comments were made by Joseph Pechman who observed:

Lyndon Johnson, according to the newspapers, got himself into a position where he did not receive certain information. How does a man like that, or any executive insure that information he does not like to see will still filter through?

Herbert Simon picked up the thread:
I do not know any way we can get the President of the United States to accept information that he really does not want. But let us suppose that, in some sense, he wants information that he cannot get because of how he organized himself. n the issues that come to the President for decision, there frequently are different sets of information and values associated with different points of view. He must organize himself so that he has at least one information channel from each of these sets. But that does not eliminate the problem of getting information in usable form, given the very limited time at his disposal. He cannot make the day longer than twenty-four hours.

Lincoln Gordon followed with these observations:

It seems to me that the question as formulated is irrelevant to the problems of an information-rich and communication-poor world. I suspect that Julius Caesar may have suffered too from listening to only what he wanted to hear. I was a little surprised by the comment that Lyndon Johnson was the most screened President. I saw first-hand something of his working methods, and had a strong impression that the volume of information which got to him was quite large. Eisenhower, of course, was a classic example of the screened President. But Johnson used to take a vast stack of reading material home with him. He did not need much sleep, and would wake up at 5:00 a.m. for two consecutive, uninterrupted hours of reading. Whenever one of my memos got to him, he acted on it the same or the next day.

The next observation came from Nicholas Johnson, who said.

In my own personal experience with Lyndon Johnson, I found him to read widely and seek advice wisely. He would deliberately set up debating societies before him, in effect, to hear all points of view. He also read outside normal channels. This is what I in my own life, and I suspect most of us do. I sample a wide spectrum of material, so as not to become a prisoner of my own screening system.

The last comment came from Anthony Oettinger, who wrote with great insight about presidential information needs and problems in his Compunications in the National Decision-Making Process. After a comment or two about presidential information systems, he returned to the core of Nobelist Simon's paper, lauding Simon for offering three very deep, important, fundamental principles:

Attention is a scare commodity,

Information technology allows effort to be displaced from possession, storage, and accumulation of information, to its processing, even if the information is located in the world itself, rather than in the file.

Proper filtering and organizing of the environment of the person whose attention is scarce are critical matters.

Obviously, the information difficulties experienced by President Ronald Reagan in late l986 in what has been called the "Irangate Affair," among other appellations, is far from new in American political history (91). It is surprising that the American media, forever questing for flaws in political leadership in the United States, have not paid more attention to the vital need for improved continuity in the Executive Office of the President communication and information processes.

OST and COSATI

While there were questions about the efficiency and effectiveness of Executive Office of the President and presidential information and communication systems, OST was still pressing ahead to improve Federal STI programs. In response to a January 6, 1970 memorandum to the OST Executive Officer, a list was provided of working and authorized OST panels and their members for which we were responsible (92)

(92) Aines, Andrew A., OST, Memorandum to David Beckler, OST, Subject: OST Panels in the Area of Information and Communications, January 12, 1970, pp 3.

The memorandum made it clear that none of the COSATI panels and task groups were included on the list shown below:

Task Group on Answering Public Mail Criticizing Funding for Research Projects. Chairman: Dr. David Hersey, SIE

Colloquium Advancing Frontiers of Communications and Information Sciences. Chairman: Dr. Ruth M. Davis, NLM

Study Group on Micromedia. Chairman: George B. Bernstein, U.S. Navy

Study Group on Earth Resources Satellites. Chairman: Robert L. Bell, NASA (Members not yet selected)

Work Group on Charges for Bibliographic Material on Magnetic Tape. Chairman: Melvin S. Day, NASA (Members not yet selected)

Study on Pricing of Government-Derived Scientific and Technical Information. Chairman: Russell W. Titch, Commerce (Members not yet selected)

Work Group to Define Common Data Elements for Project-Reporting. Chairman: Jack Grewell, FAA/DOT

Study of Government R&D in Information Sciences. Chairman: Richard Wilcox, Office of Emergency Planning, EOP (Members not yet selected)

Study Group on Information Resources for Environmental Quality. Chairman: Dr. Henry A. Kissman, FDA (not yet underway)

Analysis and Synthesis of Recommendations to OST and COSATI in Earlier Studies on Information and Communication. Chairman: Dr. Murray Turoff, OEP/EOP
(Members not yet selected)

Colloquium on Information Systems for Social Problems. Chairman: James Mitchell, Brookings Institute

Private Sector Complaints

Periodically, there would be complaints from the growing private information sector about governmental STI initiatives. One that was brought to our attention was from Dr. Eugene Garfield, President of the Institute for Scientific Information, Philadelphia, Pennsylvania (93

(93) Aines, Andrew A., OST, Memorandum to Dr. Lee A. DuBridge, Director, OST, Subject: Communications and Information; Weekly Report, January 10, 1970, pp 4.

Dr. Garfield took umbrage at NSF's funding support of the American Chemical Society's science information upgrading program, because he felt that it was unfair competition to his own much more modest chemical information program. BOB's Robert Howard had prepared a draft response to Garfield stating that BOB frowned on operational support for ACS and all other professional societies, similarly being assisted by NSF in the development of their information programs, and only seed money for development purposes was being provided. I informed Bob Howard that it was our policy, frequently discussed with Hugh Loweth and other BOB authorities in the past, to assist scientific societies in maintaining the health of their science communications programs only during this period of proliferating literature and costs, but we did not want the Executive Office of the President to get drawn into a battle between the professional societies and the private sector. Earlier, during budget discussions with BOB, we had advised BOB authorities to keep a tight rein on NSF in dispersing its funds to too many professional societies, especially those that were confusing start up with operational support. In this regard, we were sympathetic to Dr. Garfield and his petition for relief, but we were also aware of a movement on the part of the Information Industry Association to convince Congress to require NSF to provide "seed money" to industry. It was pointed out to Howard that NSF claimed that NSF funds contributed to the development of citation indexing, Garfield's bread and butter program. I suggested to Howard that before he responded to ISI, it would be appropriate to get a statement from NSF and from ACS. I also pointed out to Howard that as the for-profit information sector grows, we could expect to get more

private sector pressure. This was all the more reason why the FCST policy on responsible agents that it supported ought to be implemented so that contenders for the control of the nodes and links of knowledge in science and technology will be able to work with a set of responsible agents rather than with BOB and OST. I concluded my report to Dr. DuBridge with a comment that the COSATI Task Group on National Information Systems for Science and Technology would be invited to reflect on this issue (93) Fortunately, the problem was solved with the passage of time. when NSF concluded that the continued support of the professional societies was no longer an emergency. There is no doubt in my mind but that the NSF support program had a positive effect in keeping the professional society science communication programs solvent during this difficult era, a contribution to national science and technology that should be long remembered.

International

We could detect other strains resulting from the global movement into the Information Age. Eric Kierans, Canada's Communications Minister, complained that his retype's sovereignty was being threatened because his country was being plugged into the American computer system at a rapid pace. He announced his plans to introduce legislation in 1970 to regulate data-gathering by Americans, as well as other efforts of the U.S. computer industry. He called for a serious look at the implications for Canadians of the storage of personal information about them in U.S. databases. On the economic side, he stated that of the $12.5 million Canadians were spending monthly on computers, $12 million was being spent in the United States (93). As I watched Kierans perform, it struck me that he had no counterpart in the United States government. To this day, I wonder why there has been no political movement in this direction. On the other hand, how many decades did it take before a U.S.Secretary of Transportation was appointed?

While on the subject of transportation, my weekly memorandum to Dr. DuBridge contained the following:

At a Unesco meeting in Paris in December 1969, the well-known science fiction writer, Arthur C. Clarke predicted the death of cities, the end of the agricultural era, work will be done in homes rather than offices, and worldwide education will be by television. His slogan for the future: "Don't commute, communicate!" (93).

The prescient Dr. Clarke did not state when these events would take place, but, almost two decades later, observing the continued growth of cities and office buildings, it does show some of the danger of making predictions.

OST and COSATI

As the pressure to improve the quality of the environment continued, it was discerned at OST that one of the problems that would have to be solved was the growing need to improve environmental information programs. It was for this reason that Dr. Henry Kissman, FDA representative to COSATI, was asked to form a small interagency group made up of the STI managers of those agencies that were involved in Federal environmental programs to make a preliminary study of the special problems dealing with information in the environmental quality field. The gulf between words and deeds was underscored by the problem of the Department of Agriculture to find enough funds to support the continued publication of its pesticides publication at a time when the subject was getting hotter and hotter (93)

NLM

Personnel and funding cuts at the National Library of Medicine was making it necessary for that agency to consider curtailing its international interlibrary lending service program. The DHEW leadership reconsidered this change after discussions and restored the two positions to continue the program. Dr. Cummings planned to establish a one dollar handling/postal charge for services to help. He also stated that he had decided to replace the head of the NLM Toxicological Information Program because of the lack of progress. He voiced a concern about the Chemical Abstract Service decision to jack up the price of registering chemical compounds to $20. The CAS Chemical Registry system development program had been strongly supported by NLM. Dr. Cummings stated that 32,000 chemical compounds were identified in NLM and FDA projects. Paying $20 for each compound would be prohibitive . He was asked to contact Paul Olejar at NSF, who was the project officer working with CAS on this project.

HUD

The lack of progress at the Department of Housing and Urban Development in fashioning its information program was a constant source of irritation in the COSATI community. At my request, a meeting was held with George W. Wright, Office of the Deputy Undersecretary, on the subject. He explained that Secretary Romney was embarked on a program to make HUD a more cohesive operation. The Urban Knowledge Center program had been sidetracked during this reorganization

period, he explained. It was his hope that something would now be done about it with the arrival of Harry Finger from NASA, but he could not be sure because another HUD undersecretary, William Ross, was the "kingpin of information." At the least, I pointed out, HUD should name a new COSATI representative, that post was not being occupied at the time, the only Federal agency not taking advantage of participation. I also complained that HUD had not complied with the OST request to provide an STI stewardship review in 1969 (93). Our experience with HUD convinced us that there was a lot of looseness in its operation, at least in the STI management area. There is little or no evidence that this problem has been solved in the intervening years.

Private Sector

One of the relationships that I cherished during the period that I was in the Executive Office of the President was the one that was developed with the American Business Press, Inc. The long time general counsel of this organization was attorney Robert Saltzstein, whose office was in Washington, D.C. Early on, APB decided to establish a special committee, the Government-Business Scientific and Technical Information Committee, whose acronym was the unmelodious "GOBSTIC." It was about this time that the publishers of the illustrious technical magazines, which at that time was a peculiarly American institution, discovered the Information Revolution and the beginning of a shift to electronics in publishing. The group saw the efforts of OST and COSATI as unique and

a positive effort to cope with the rapidly approaching changes that would result in changed relationships between the government and the private information sectors. I remember in particular how our office helped the private information sector when Federal agencies sought to undertake the support of new technical publications, often without being aware of commercial counterparts already in existence. On a number of occasions, we convinced groups that were

planning to publish new technical periodicals in the Federal governments to cease and desist much to the appreciation of the APB. In 1970, I was visited by Ronald Resh, an APB attorney to thank OST for our help in getting the NASA astronauts to attend the APB Silver Quill Awards ceremonies that were held in Washington annually. We built up a considerable amount of good will with this group, which was eroded a few years later when the Federal STI coordination role was transferred to NSF. I was convinced, based on my experience with APB, that a harmonious relationship could be developed and maintained with the private for-profit sector, if there was a group willing to undertake the course of close communication and interaction with key members of the private sector. I still feel the same way today. Unfortunately, except for a person here and there in the Federal government, this attitude is uncommon (94).

(94) Aines, Andrew A., OST, Memorandum to Dr. Lee A. DuBridge, Director, OST, Subject: Retrospect and Commentary, January 17, 1970, pp 3.

With all of the efforts being undertaken by OST and COSATI to improve science communications and STI management, efforts that were advertised to the U.S. general press from time to time, there were occasions when it appeared that the word was not getting around. I was called by a young lady, Phyllis Huggins, COMPUTER WORLD, located in Los Angeles, who stated that OST is not showing any concern about the computer field and what were we going to do about it. She was told courteously and firmly that she was misinformed. We were involved in a number of activities, listing these for her. She was invited to visit with the OST staff to get the flavor of all of our many efforts in the information and the computer field. Unfortunately, she was unable to do so, but she did say that she was impressed with the accounting provided her (94).

Technology Transfer

For the most part, the Federal R&D agencies were interested only in mission-based R&D, and were suspicious of pressures to get into technology transfer for reasons that they believed were legitimate. This attitude was magnified by frequent comments made by members of Congress that the funds being made available to them were only to be employed for accomplishment of their legal missions. Technology transfer or utilization in the 1060s was not regarded with the respect and veneration during that period as it is today. Several of the Federal R&D managers and members of Congress could not understand the logic of this restrictive approach, especially in light of the comparatively small investment that would be required to "push" federally-generated STI that resulted from R&D into use by the private sector. One agency, NASA, found right from its start that technology transfer was of high priority in the eyes of the sponsors of the NASA legislation. It was no surprise in OST and other Federal agency quarters when a National Academy of Sciences-National Academy of Engineering task force issued a study report on Technology: Processes of Assessment and Choice.

The study was requested by the Subcommittee on Science, Research and Development, House Committee on Science and Astronautics, after it held hearings on Bill 6698 to assess the effects of applied research and technology. The report called for consideration of a Technology Assessment Office and a Joint Committee on Technology Assessment. It recommended that OST form a new division of technology assessment under a deputy director or, alternatively, an enlarged OST staff with new staff and resources appropriately distributed with responsibilities in relationship to technology assessment. Also called

for was a new division in NSF to support OST. The OST entity would create and direct an information management system for technology assessment. OST would be given $10 million a year to do the job; NSF would get $40 million for external contracts and grants to support the program (94). The plan was never implemented as recommended. This was another opportunity that "went down the drain." Hindsight tells us that such an action might have had a positive effect in con-converting the Federal R&D program into a "dual-use" R&D program, one which potentially might have contributed to the solution of national productivity and innovation problem that plagues us in the 1980s. To this day, the notion of an information management system for technology assessment remains undebated and unimplemented.

NOTE; ONE OF THE PREMISES OF THE BOOK, TO BE SHOWN IN ITS INTRODUCTION AND JACKET, IS THAT THERE WERE A NUMBER OF ACTIONS THAT COULD HAVE BEEN TAKEN OVER THE YEARS THAT MIGHT HAVE RESULTED IN A STRONGER FEDERAL R&D PROGRAM AND IN TURN A MORE POTENT NATIONAL SCIENCE AND TECHNOLOGY EFFORT. WISE DECISIONS WERE REQUIRED AT A NUMBER OF TEMPORAL JUNCTURES TO MOVE THE GOVERNMENT INTO A HIGHER MANAGEMENT GEAR. THERE WERE A SCORE OR MORE OF VALUABLE STUDIES MADE IN AND OUT OF THE GOVERNMENT DURING THIS PERIOD THAT MADE THOUGHTFUL RECOMMENDATIONS FOR ACTIONS, WHICH WERE NOT FOLLOWED. MY THESIS IS THAT THIS WAS A COSTLY ERROR THAT WE ARE PAYING FOR NOW, DEARLY.

International

In writing about the initial work done by a multinational task group, under ICSU-Unesco, to create the UNISIST program, mention should be made of the 300-page Gardin report which made a number of proposals that the task group found too authoritarian in approach. For this reason, Scott Adams, Deputy Director of NLM, was asked to write a short summary report representing the views of the central committee, a report that would stress an evolutionary approach to the development of an international STI system. The report recommended a world register of periodicals; an R&D group to recommend programs; avoidance of a single world language, but recognition that English was the most popular language for information transfer, not necessarily use; the need for developing countries to have a suitable technical base to be able to use information products of large systems; much more work on the analysis of information needs; and more ample support of such programs as CODATA in the critical data area (95). At the request of the International Office, Department of Transportation, Dr. Rossmassler, OST, addressed a group of West German mayors on the impact of the computer on local and regional governments. Rossmassler stated that the visitors were particularly interested in how the President uses computers, what areas of government administration are most advanced in use of computers, and what areas close to executive decisions are likely to use computers for decision-making.(95)
(95) Aines, Andrew A., OST, Memorandum to Dr. Lee A. DuBridge, Director OST, Subject: Weekly Record of Events, Activities and Views, January 24, 1970, pp 5.

National Library of Medicine

Several subjects were discussed with Dr. Martin Cummings and his deputy, Dr. Bo Nider. On Toxicology, an important decision was made to narrow the program's scope to match NLM's budget and manpower. The pesticide portion of the program would be given priority, especially in light of the
decision of the National Agricultural Library to give up its Pesticides Abstract Journal and its 50-year old Bibliography of Agriculture. On the copyright problem, the Williams and Wilkins suit against NLM and DHEW for alleged copyright infringement continues with the Department of Justice setting strategy for NLM. On the three national library cooperative program, progress was reported in the establishment of a national serial records system. The Association of Research Libraries was also lending a hand on this project. On standards, a problem is hitting the libraries. There is competition between CODEN and ANSI standards for title identification. A check was made with the Chairman, Panel Z39, ANSI, Dr. Jerry Orne, who down-played the problem. He also volunteered the information that that a recently quoted estimate of 30,000 to 50,000 serial publications was wrong. A more accurate global count was about 210,000. On funding, NLM asked for OST's help with BOB, which was planning to make substantial cuts in the NLM budget. This would result in a reduction of NLM's leadership in the biomedical information field, Cummings feared (95)

COSATI

In January 1970, an unclassified directory of 119 Federally-supported information analysis centers was prepared by the National Referral Center for Science and Technology, Library of Congress, at the direction of COSATI's Panel on Information Analysis Centers, chaired by Dr. Edward Brady, NBS. It updated an earlier directory issued April 1968. Described in the new directory were the mission, scope and services provided by the centers. Included also were an index of subject areas, an index of center directors, a list of the numbered centers and a list of their locations. In the Preface, the Panel stressed the point that there were two qualifications to be met before the individual centers could be included: the center had to be supported wholly or in part by Federal government funds, and the centers were required to perform a

majority of its functions within the scope of the Panel's definition of an information analysis center, which was as follows:

An information analysis center is a formally structured organizational unit specifically (but not necessarily exclusively) established for the purpose of acquiring, selecting, storing, retrieving, evaluating, analyzing, and synthesizing a body of information and/or data in a clearly defined specialized field or pertaining to a specific mission with the intent of compiling, digesting, repackaging, or otherwise organizing and presenting pertinent information and/or data in a form most authoritative, timely, and useful to a society of peers and management.

The four Panel criteria for the IACs are:

The key activities are the analysis, interpretation, synthesis, evaluation and repackaging of information for the purpose of enabling users better to assimilate the information or numerical data of a specific field.

An IAC uses subject specialists to perform the analysis, evaluation and the synthesis.

The IAC produces new, evaluated information in the form of critical reviews, state of the art monographs, or data compilations and usually provides substantive, evaluated responses to queries.

The IAC provides assistance to a community of users and not just assistance to "in house" personnel.

The Panel excluded information centers from consideration those centers that provided management information services, stored raw data files exclusively, provided only abstracting, indexing and accession services, acted as conventional scientific and technical libraries, document depots, mapping or charting activities, or provided regional or State information services, such as agricultural utilization services.

Several of the centers are listed below to give the reader more information about the kind of services they provided:

Aeronomy and Space Data Center
Air Force Machinability Data Center
Air Pollution Technical Information Center
Alloy Data Center
Arctic, Desert, Tropic Information Center
Atomic and Molecular Processes Information Center
Atomic Energy Levels Data Center
Berkeley Particle Data Center
Binary Metal and Metalloid Constitution Data Center
Cryogenic Data Center
Crystal-Data Center
Electronic Properties Information Center
ERIC Clearinghouse on Exceptional Children

With the elimination of COSATI in the early 1970s, it is fair to say that the Federal government thrust to set up and support information centers of excellence serving the public and the private sectors began to dissipate. Only a small number of the original centers exist today. Their disappearance does not mean that they were unsuccessful, thus terminated. It is my belief that they are the victims of budget reductions, lack of support by leaders in Congress, the Executive Branch, and in science and technology generally. Thus, one of the most forward-looking recommendations of the Weinberg (PSAC) Report became a casualty (96)

(96) Brady, Edward L, NBS, et al, COSATI Panel on Information Centers, Directory of Federally Supported Information Analysis Centers, Produced for COSATI by the National Referral Center for Science and Technology, Library of Congress. Much of the revision was made possible by the contributions of Walter Kee, USAEC.

COSATI-OST

Budget issues continued to plague the quest to improve Federal and national STI programs. As mentioned in several places in this book, information programs dealing with science and technology are particularly vulnerable to the vagaries of budget ups and downs. Those who are responsible for funding Federal R&D, in any Administration, often regard their STI programs as vulnerable to cuts. Almost as a reflex action, they will seek to save funds for what they consider their hard core

requirements: bench workers, facilities, and
R&D projects. It would be hard to convince R&D managers to do things differently, but, as a matter of logic, on many occasions, it would make more sense to save their STI programs, especially those that involve collection and analysis of STI obtained elsewhere. Budget cuts in travel, attendance of scientific and technical meetings, use of long distance telephone, purchase of books and other literature, use of database services--actions of this sort will also reduce the knowledge acquisition that might be vital to the success of an R&D project. Early in 1970, it became necessary to protest reductions in Federal science communication programs. A paper was prepared that cited general and specific problems (97).

(97) Aines, Andrew A., OST, Memorandum to Dr. Hubert Heffner, Deputy Director, OST, Subject: Summary of Budget Issues in the Information Area, February 12, 1970, pp 4.

In the general category, it was pointed out that some of the results of cutting back on Federal agency STI programs might result in:

Reduced dissemination of technical information to the government and private sectors.

Increased duplication of R&D in both sectors.

Reduced capability to repackage information and data, which is so important in stimulating technolopgy transfer.

Shrinking the amount of funds that could be used to support scientific journals that survive because of page charge support provided by the Federal government. Technical journals produced by the private sector that also play a vital role, could also be hurt because of lower advertising revenue.

The consequence of raising the price of Federal information products, such as technical reports, one of the solutions offered by the budget-cutters, could result in reducing the flow of STI to legitimate users, especially small ones, who are not part of organizations ready to pick up the bill for
publications and other information services. This I see as continuing problem that becomes even greater in an era that almost requires ability to employ electronic databases.

Examples of fund reductions that were hurting Federal agencies and programs included:

Zero funds for the State Technical Services program discussed elsewhere.

The elimination of funds for technology utilization by the Atomic Energy Commission. A fifty percent reduction in information analysis centers, the AEC's overseas science and demonstrations/exhibits program, educational programs related to environmental issues, and the participation of the U.S. in the 1971 Geneva Conference on Peaceful Uses of Atomic Energy.

The elimination of two long-standing programs of the Department of Agriculture: the Bibliography of Agriculture, and the Pesticides Information Center.

The National Library of Medicine was required to cut back on its Toxicological Information Program. Services of the Lister Hill Center for Biomedical Communications were also to be reduced. All FDA information programs were to be reduced and the same applied to information dissemination programs of the Office of Education.

The National Science Foundation, which was the main supporter in the Federal government for the not-for-profit information community, recognized that reduced
funding would be a blow to professional societies and other groups that were seeking to modernize their information programs.

The memorandum also pointed out that the Federal agency focal points and their staffs, who were responsible for the establishment and operation of the agency STI programs, were
also going to be decimated in the cost-cutting process. This could be the most serious loss, in the long pull. Subsequently, I penned a short comment to Dr. DuBridge on this subject, pointing out that (98):

(98) Aines, Andrew A., OST, Memorandum to Dr. Lee A. DuBridge, Director, OST, Subject: Review of the Week (Budget

Issues), February 13, 1970, pp 4. :

Several agencies are cutting back on their STI services, putting the bite on STI users by demanding higher user-charges, and reducing their staffs. Plans for new starts and improved services have been set aside or cancelled. If the postulate is accepted that good knowledge is the life-blood of scientists, engineers, educators and managers, alike, we should encourage the Federal agencies to refrain from dealing body blows to their information programs.This does not mean, however, that current Federal STI programs would not gain by judicious trimming, re-organizing, and lots of management attention. With more than a half-billion dollars going into Federal agency STI programs every year, it is obvious that there is no room for complacency. The Bureau of the Budget must find a way to prevent the hemorrhaging of the Federal STI programs as a consequence of excessive budgetary cuts (98).

Disappointed that Federal environmental quality information systems were not being developed as rapidly as needed, I called upon Dr. Henry Kissman, FDA, to organize a group to attack this problem. Dr. Robert Coon of his staff was designated the executive secretary of the panel. The initiative was coordinated with Dr. John Buckley, the OST staff person responsible for environmental quality programs (98)

Department of State

Another organization that needed help in improving its total information program was the Department of State. It had become evident to me in my years of interaction with this organization that it was far behind other major agencies in the application of modern information techniques and programs. Curtis Fritz, a Department of State official, who worked within OST as a systems development expert in the national systems program, verified in a number of ways that the Department of State would profit by a dramatically upgrade information and communication system. Other State Department officials similarly saw the need for improvements. At the request of Thomas Stern, Department of State, who had some responsibility in this area, OST prepared a list of government information experts, some of whom would be assembled into a panel to appraise the State Department information programs and make recommendations for improvement. Obviously, scientific and technical information was only a small component of the total world information flow that at times inundated the State Department. It was evident that the success of this agency largely depended on wise information husbandry, but this reality had not been receiving the kind of priority that it deserved. The State Department has obviously solved at least part of the problem in the intervening years, but it is highly probable that there are still difficulties (98). During this period, we received a query from the State Department Language Services Division about any plans OST had to establish a foreign science translation center. We had to admit that there was a need for a considerably better U.S. government STI translation program and possibly a center for the purpose, but our examination of the subject revealed that the priority for such a center was low at that time (98).

Technology Transfer

Technology transfer continued to be one of the interests of the Senate Subcommittee on Science and Technology, chaired by Senator Jennings Randolph. Interaction between the Senator, his staff, and OST was frequent. The Senator was pleased with the testimony given at his hearing on technology transfer by Dr. DuBridge and Dr. Harvey Brooks, Harvard University. The Senator was also interested in the COSATI Panel on Technology Utilization efforts in this field. The depth of his interaction and his interest in working with OST was conveyed to Kenneth Goodwin of BOB (98).

Product Safety

The programs of OST and COSATI were becoming more widely known in government circle and occasionally we found ourselves being drawn into all kinds of other Federal programs that called for strong information programs. When the National Commission on Product Safety was established by Public Law 90-46 by the 90th Congress, it called upon OST to counsel it on how to establish a sound and efficient information system (98).

National Library of Medicine

We discussed with Dr. Martin Cummings his proposal to turn out an experimental publication on health aspects of environmental quality research. We were both interested in avoiding the publication of a document that was already being marketed by the private sector. We also discussed the fee schedule of the 3i Science Information Center, which was the American agent of Holland's Excerpta Medica. This organization had developed a program calling for annual database fees over and above the specific use charges. It was also found that the American Chemical Sociey had contracted with 3i Science Information Center to make the Chemical Abstract Service Data

Base available for $10,000 a year. In my report to Dr. DuBridge, I wrote:

Just what relationship the Chemical Abstracts Service has with 3I is interesting and worth looking into. Dr. Cummings insisted that NLM's Toxicological Bibliography, which sells for $14 a year, provides better data than Excerpta Medica`s Adverse Reaction Titles, which goes for $1,000 a year. It is easy to understand why Excerpta Medica and other organizations in the private information sector would like to water-down government STI programs (98)

This 1970 observation should not be construed as antagonism to the private sector, but it does reflect a deep concern that many people who need specialized information would be unable to find the kind of money that would be needed to buy information at inflated costs. Moreover, Excerpta Medica, a Dutch company that had received special help from the U.S. government, had launched a vigorous political and legal effort to unsettle one of the highly respected, blue ribbon Federal STI programs for commercial gain (98).

Public Awareness

Another OST program was called for in an article in the Congressional Record,(page S.1288, February 5, 1970), the development of a science and technology public awareness program to feed STI to the general public and to State governors and legislatures. It was recommended that an appropriate unit be established in OST to serve as the focal point for communication between the Federal and State governments on scientific and technological matters. The appearance of this article was as far as it went. No formal recommendation came to OST for action in setting up an information center and program along the lines suggested. If such a request had been forwarded, the chances were low that OST, with its limited personnel, would agree to implememt it (98).

Sales of Federal STI

COSATI continued to turn out studies on a variety of subjects. One that made its appearance in early 1970 dealt with the sales of Federal STI (99)

(99) Committee on Scientific and Technical Information, Federal Council for Science and Technology, Guidelines for Selling Federal Scientific and Technical Information, February 1970, pp 14 (unpublished).

The paper was a trial balloon to determine if the Federal agencies were prepared to agree to a single pricing system. In the preface, I wrote:

In his State of the Union message, the President challenges us to "turn the wonders of science to the service of man." Today, we must accept this challenge and open our reservoirs of knowledge to the practitioners of technololgical innovation. We must find and develop the widest possible avenues for dissemination STI and build stronger competencies for handling information using more modern techniques. Above all, we must overcome fear - fear to market
and fear to experiment - and move along toward stronger working partnerships with industry and non-government institutions. These Guidelines for Selling will help - but only if you adopt, test, and refine them to help us meet the President's challenge.

The paper resembled the classical staff study, commonly used by military officers, including: a statement of the problem, fundamental assumptions, a discussion of information resources and information services, guidelines for pricing information, and set of recommendations for action by the Federal agencies. It was found that the recommendations were too generalized to be of value to the agencies. Moreover, each of the agencies had unique operating conditions that influenced its dissemination of information. An effort to find enough commonalities to justify a consensus set of guidelines was not produced and the matter was set aside (99).

International

Canada

It was always a pleasure to work with our Canadian opposite numbers in OECD Information Policy Group matters. With rare exceptions, the U.S. and Canadian delegates worked in close harmony. During the 1960s, we felt that we were good friends and had parallel interests. One of the considerations that we kept in mind was that this friendship rose above and should not relate to the relative size and power of the two countries. But with the passage of time, we could begin to detect a divergence. The Canadian government undertook a series of major studies dealing with information, computing and

communications, studies that had little or nothing to do with OECD, being focused on the situation in Canada and how it should position itself in the world. During this decade, there was increasing evidence that nationalism was becoming growing north of the border. The convergence of the two trends, dealing with the Information Age and nationalistic fervor was reflected in some of the aforementioned studies.One example is a speech given by the Canadian Communications Minister, Eric Kierans, in Canada. Some of his comments are reported below (100):

(100) Kierans, Eric, Minister of Communications, Canada, speech given before the Data Processing Institute, Ottawa, Canada, title: The Computer: Social and Economic Aspects, February 23, 1970, pp 12, (In French and English).

None of us require additional persuasion that we are in the midst of a world-wide information explosion that is associated with the rapid expansion in the use of computers and associated communication systems in our society. Thus, it is essential to ensure that the enormous benefits of this computer revolution be made available to the maximum number of Canadians, wherever they may live. The pace of events to date makes it necessary that we take the first steps in the formulation of policy that will protect the Canadian interest...It is becoming more and more common to assess a nation's progress by the amount of computer power it can muster when required, and the uses to which it puts that power. At this moment, we compare favourably with other countries in the world but we are far behind the United States.

At this point in his speech, the Minister reverted to French and made a comparison of the number of computers in use in both countries and the growth of television and what they could mean from a socioeconomic standpoint. He gave a number of examples of what was happening to individuals who were using computers in the United States and in England. He continued:

All of this presents an awesome challenge for government, as if we did not have enough. In the Department of Communications we have at least made a small start -- and it is hardly more than that --with the Telecommission which is a study in depth, with the participation of Canadian industry, universities and other organizations, of the problems resulting from the computer revolution, as well as telecommunications, and their effect on the Canadian scene...As national systems expand, we note that they are often closely linked in a corporate sense, and that there are economic and technological forces at work which could greatly accelerate this process. There is, in my mind, a real danger that, as a large computer utility market develops in Canada, it will be dominated by systems located south of the border...Should this trend be allowed to continue it could have grave implications for Canadian sovereignty. This then is at the root of my concern, since in such a process we would not only lose one more manufacturing or service industry, but we could lose control of how information will be stored and processed in our country (100)

Kierans continued on in the same vein, warning his listeners that unless Canada took this problem to heart, it could find itself under U.S. information and communication system domination. Other Canadians took up on his warning and a number of government actions began to appear that indicated that there was agreement that "the tide had to be stemmed." Unfortunately, these were largely directed against the United States, whose policies were anything but unfriendly to Canada in this and other information-related matters. The schism, largely influenced by the information revolution, might have been inevitable, but it became a painful reality to some of us who had worked together in a fraternal manner in international information programs. The final chapter is not yet written; time will determine if the rift is permanent.

Environmental Quality

Not only was the United States concerned with the need for much better environmental data, there were signs that the countries of Western Europe shared the same view. This became evident when David Z. Beckler, OST Executive Officer, asked me to prepare a proposal to the Council of Europe calling for an international exchange of environmental information (101). The Council of Europe (ECE) had already shown some degree of interest by appointing Dr. Amasa Bishop, a nuclear expert, to direct its environmental quality program. In his instructions, Beckler explained that what he wanted was a proposal that would suggest U.S. initiatives in the ECE-sponsored Prague Conference on the Environment that might lead to the estgablishment and development of a cooperative program for the international exchange of STI relevant to efforts to improve the quality of the environment. The information menu would include R&D information, information for planning at all government levels, information about national experience, information on current projects underway, data to indicate physical or baseline activities, and work underway under the sponsorship of such international organizations as ECE, the European Communities, FAO, IAEA, ICSU, OECD, Unesco, and WHO, all of whom were edging into environmental quality programs.

The proposal called for an extension of existing national and internal environmental quality information efforts. Some of the American facilities already involved in information operations were the Clearinghouse for Federal STI, the Science Information Exchange, the National Referral Center for Scientific and Technical Information, the National Library of Medicine, the National Agricultural Library, and the Library of Congress. Some of the specific centers already in operation were the Air Pollution Technical Information Center, the Toxicological Information Program, the Pesticides Information Center, and 10 others supported by the Federal government. The proposal asked for the preparation of an international basis for the collections of environmental information for both domestic and international dissemination, and suggested the content and format that could be used in the total effort. The proposal concluded with a recommendation that a working party of designated national representatives be assembled in the summer of 1970 to work out all of the details of the international program. No action was agreed to at the Prague Conference, leaving each country and international

organization to its own way (101)

(101) Aines, Andrew A., OST, Proposal for an International Program to Exchange Information and Data Pertaining to the Improvement of the Quality of the Environment, February 16, 1970, pp 5.

Congress

NOTE: THE FOLLOING MATERIAL SHOULD BE COMBINED WITH WHAT WAS WRITTEN ABOUT THE CONGRESSIONAL MEETING IN ANOTHER PART OF THE BOOK.

In January 1970, the House Committee on Science and Astronautics and its Panel on Science and Technology sucessfully undertook the 11th meeting of the panel which was dedicated to The Management of Information and Knowledge, an event that is described elsewhere in this book. After the meeting, Representative Emilio Q. Daddario (D.Conn.), who brilliantly staged the event, asked the individuals who had assisted him in the meeting's preparation and the meeting itself, to provide him with their post-mortem comments (102).

(102) Aines, Andrew A., OST, Memorandum for the Honorable Emilio Q. Daddario, Chairman, Subcommittee on Science, Research and Development, Committee on Science and Astronatics, Subject: Reflections (and a Few Recommendations) on the January Panel Meeting, February 16, 1970, pp 8.

My first comment was to applaud his leadership and to adjudge the quality of the meeting as outstanding in every measurable way. The meeting was unique, the only one of its kind. It demonstrated the U.S. Congress' leadership in information and communication matters by assembling a brilliant array of scientists and others to survey the size and shape of the approaching Information Age. My second observation was the expression of a hope that future meetings of the House Committee and its Science Panel on this subject would include more information scientists of high reputation to talk about what was and was not being accomplished in their field. A few of the members of the Science Panel were not as well versed with what was happening and what might happen in the Information Age, nor were they expected to. One result was that they tended to gravitate into areas of their own expertise, thus straying away from the subject of the meeting. I lamented the press coverage of the meeting, pointing out that the local media people, who cover all kinds of meetings, myriads of them, in the Washington area, tend to become jaded with time and exposure. There might be better coverage - no complaint about attendance which was excellent - at the next Science Panel meeting, if it would be held at Yale, Harvard, or some other site, less populated by resident media people. There might be virtue in considering the use of a university, such as The Johns Hopkins or MIT, possibly an organization like the National Academies of Science and Engineering, to run the next meeting of the Panel on management of information and knowledge. My only criticism of an otherwise splendid meeting was as follows:

None of the speakers really got into the theme of the meeting as deeply as it deserved. Nothing was said about information networks, nothing about the huge information programs already underway, very little about international programs (Harrison Brown mentioned the NAS-NAE and ICSU-Unesco programs only in passing), nothing about the way each advanced country is moving to harness the computer to serve its needs, hardly anything about the impact of communications and information-processing on the way we live, hardly anything about the coming of CATV or about the use of the home as a communications center, nothing about the congressional surge toward the modernization of its data programs, nothing about the problems of the professional societies that publish scientific literature, et cetera.

The above statement should not be construed as undermining what went on in the meeting in the slightest. Hindsight always makes criticism easier. It would be a real accomplishment to undertake a second meeting on this subject. Perhaps Congress would be willing to sponsor one in the next year or two.

One of the high points of the congressional information building program was announced in March 1070. This was new legislative authority written into the Congressional Reorganization Act to create a new congressional information system that would, at the outset, be operated by the Legislative Reference Service, selected because of its greater experience in the area. Much credit should go to Robert L Chartrand and others in Congress for the breakthrough. (104)

OST and COSATI

The Ultimate Federal STI Center

Having entered the scientific and tehnical information field from Federal R&D, the health of Federal R&D information programs was a constant concern. It was my contention during my OST days that progress in this area could be better and deserved more attention than it was receiving. In a related field, it was evident that too little was being done in an organized fashion to improve the flow of Federal STI and related data to city and state governments. It rankled that the State Technical Services Act, which was a thrust in that direction, had been terminated. In a discussion with Eric Ward, the Executive Secretary of FCST, this matter was ventilated. Expressing interest, Ward asked me to prepare a short paper on a proposal that, if implemented, might go at least part of the way to solve the problem. In March 1970, I sent him a brief paper on the subject (103).

(103) Aines, Andrew A., OST, Memorandum to Eric Ward, Executive Secretary, FCST, Subject: Federal Scientific and Technical Information Center, March 12, 1970, pp 2.

The paper started with a statement of the problem: what could be done to improve the flow of Federal scientific, technical, and associated information and data to cities and strate governments, recognizing that what they want is a mix of administrative, policy, funding and STI related to their own problems and issues? It was postulated that even experienced

scientists and engineers operating at the state and city level were not fully familiar with all of the sources of Federal STI. As we move into an era of considerably more proliferation of STI, unless action is taken to solve the problem of access, it will become even harder to ferret out needed information. If information in a particular area is needed, such as toxicology, information that is characteristically scattered among the Federal R&D agencies, the task of acquisition becomes more complicated and difficult. The Clearinghouse of Federal STI, the Science Information Exchange and the National Referral Center were not organized to do more than provide lists of projects and facilities, also lists of completed technical reports or the reports themselves. It was useful, therefore, to consider the establishment of a Federal STI Center, answering to OST, designed to provide referral information in R&D fields undertaken by more than one agency. The center would be a hybrid operation manned by both scientists and information experts, much like an information analysis center. Such a center could be built by combining some of the government-wide information centers, of course. The center could be manned by agency representatives on loan to keep the costs down. Such a center would not replace the basic functions of the government-wide centers, but would add a capability that would contribute to better harvesting of the STI generated by the R&D agencies, and provide more useful information services to cities and states. (103) It was my impression that the subject would be fully discussed with the members of the FCST to reach a decision, but nothing like that transpired (103).

(104) Aines, Andrew A.,OST, Memorandum for Dr. Lee A. DuBridge, Director, OST, Subject: What We Did and Thought About During the Week, March 14, 1970, pp 4.

The Era of Magnetic Tape

As can be found occasionally in these annals of the information events during the 1960s and early 1970s, there were occasions when there appeared to be painfully slow progress, then quixotically there would be quick bursts of action. Here is one example of the phenomenon. For some time, because we were aware that the early days of the Era of Magnetic Tape had arrived, I asked the stalwart Melvin S. Day, always a good friend of COSATI and a great doer, to form a small group to prepare Guidelines for Dissemination of Federally-Owned, Machine-Stored Indexes (on magnetic tape). Just as he finished his first draft of a report, pressure from the field forced the Clearinghouse for Federal STI to distribute tapes containing the bibliographic records of the U.S. Government R&D Report (USGRDR) to both foreign and domestic users. The Clearinghouse priced the annual tape service at $1,500 for domestic and $1,850 for foreign users. It was reassuring to COSATI that the Guidelines prepared by the Day panel were followed by the Clearinghouse. In my memorandum to the Director, OST, I pointed out that buyers of the tapes can now perform their own searches and it was now possible for entrepreneurs in the private sector to provide tailored services to their customers from these and similar bibliographic tapes in the future (104).

DOD

One of the information R&D programs that was respected in and out of the government was conducted by Dr. Harold Wooster and Rowena Swanson, both of the Office of Aerospace Research, U.S. Air Force. We were sad when we learned that this program was being terminated by OAR. For reasons that were unclear, the program lost its protection. It was one of the few government programs that made an effort to seek progress in Federal science communications with the help of university and other researchers. To us, it was also more evidence of the lack of a strong DOD director of technical information (104).

Federal Teleprocessing

The two fields of communications and computer data processing in and out of the Federal government were growing rapidly , but this was happening separately. Both sectors were moving towards one another as the technologies began to blend and overlap. There was no single group in the government responsible for coordinating and planning large scale efforts in these two fields. OST called a meeting with OMB and the Office of Telecommunications Management to determine the extent of the problem and what could be done about it. We in OST were hoping that the Office of Telecommunications Management would be able to take leadership in this area. Here again, we were disappointed that the need was perceived as having low priority for EOP action (104).

On the personnel front, discussions were held with Dr. Lawrence Grayson, Office of Education, who was designated as the Chairman of the COSATI Panel on Education and Training, and with Dr. Herbert Grosch, Director of the NBS computer research and standards center, to obtain his agreement to detail Dr. Charles Meadow to OST to take the place of Steve Rossmassler who was due to leave OST in mid-1970 to return to NBS (104)

International

An interesting dilemma arose between an American-based professional society and a U.K. scientific publication. Edward Brunenkant of AEC, one of our substantial COSATI members, expressed his concern